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Dr. Joshua Lederberg Department of Genetics Stanford University Palo Alto, California

Dear Josh:

It's getting harder and harder to come by a good, new idea. Beutler in 1961 attempted to reduce the tendency to sickle in sickle cell anemics by the administration of methemoglobinproducing drugs. He reported that it worked, but unfortunately the drugs had side effects which made the therapy impractical. More recently Sirs (Lancet 1:971)(1963) reported that treatment with carbon monoxide reduced percentage of sickle cells in a patient with sickle cell anemia from 10 to 3. However, Puruggonan and McElfresh (Lancet 1: 79(1964) could not confirm this in two patients, nor did they find any indication of an improved survival time. There has to be a better way.

Best regards,

James V. Neel, M.D. Lee R. Dice University Professor

of Human Genetics

JVN:mw